II. Remarks

Reconsideration and allowance of the subject application are respectfully requested.

Claims 1-9 and 11 are pending in the application. Claim 1 is independent.

Claim Amendments

Claim 1 has been amended to indicate that the "means for multiplying" uses non-linear optical effects, and that the purpose is to expand the coverage area of the wavelength channel so as to yield a comblike multi-channel WDM laser signals comprising a plurality of more than two channels. These are clarifying amendments designed to clarify the meaning of the term "multiplying". As discussed below, it appears that the Examiner has construed this term to be a simple gain stage or a scaler multiplication. However, the entire description and drawings make it clear that by "multiplying", what is meant is that a number of channels input to the means for multiplying is processed to produce an increased number of channels. See for example page 5, line 20 which discusses the purpose of the multiplier stage 18.

Claim 2 has been amended to clarify the fact that each section has respective predetermined propagation

characteristics and that the propagation characteristics differ from the characteristics of each neighbor. It is acknowledged that this specific wording is not defined in the specification. However, it is clear from the entire description of the drawings that it is the difference in the propagation characteristics which determines where one segment begins and another ends. See for example Figure 2. If multiple segments have the same identical propagation characteristics, then they would not be multiple segments, but rather would simply be a single segment. Thus, it is respectfully submitted that the amendment to claim 2 does not constitute the addition of new matter.

Claim 10 has been cancelled. Claim 11 is a claim based on former claim 10 but which is amended to be a system claim.

Claim Rejections - 35 USC 112

The Examiner has rejected claim 10 as being indefinite for failing for particularly point out and distinctly claim that subject matter which applicant regards as the invention. As indicated, claim 10 has been cancelled rendering this claim moot. New claim 11 is based on claim 10, but this claim is a system claim and as such includes multiple components. The additional component is the means for modulating by a very low frequency which reduces

Stimulated Brillouin Scattering of the amplified signal. In view of the fact that this is a multi-component claim, it is respectfully submitted the indefiniteness rejection raised by the Examiner does not apply to this claim.

35 USC 102 Rejection

In paragraph 4 of the detailed action, the Examiner has rejected claims 1, 2 and 10 as being anticipated by Waarts et al., US Patent No. 6,298,187.

Waarts et al. does disclose a multi-wavelength source. However, as can clearly been seen for example from Figure 4 which was published with the abstract, there is a respective source P_1, P_2, P_3 for each wavelength. These are combined in the WDM devices and then amplified to produce multi-wavelength signals. Multiple tiers of such processing can further increase the number of wavelengths. However, there is no "multiplying the amplified combined signals" as contemplating the applicant's claim 1. As discussed above, "multiplying" in the context of claim 1 is clearly defined in the specification to imply an increase in the number of channels rather than simply a power scaling effect. Applicant has amended claim 1 to import this definition of the term "multiplying" into the claim. However, it is respectfully submitted that this does not in fact change the scope of the claim and that applicant's arguments would apply

equally to claim 1 in its original form. In view of the fact that there is no teaching in Waarts of any system for expanding the coverage area of wavelength channel, it is respectfully submitted that claim 1 is not anticipated by the cited reference.

Claim 2 has also been rejected as being anticipated by the same reference. The Examiner has not commented on this claim in the detailed action. Applicant notes that there is no means for multiplying disclosed in Waarts et al. which is consisting of a plurality of serially interconnected optical fiber sections neighbouring pairs of which have different propagation characteristics, as claimed in claim 2. Waarts et al. does teach the use of Erbium Doped Fiber Amplifiers, but these are not multi-segment, and do not result in a "multiplying effect" which increases the number of channels, but rather simply apply a scaler gain to the signal input to the multiplier. Thus, with respect, applicant submits that claim 2 is also not anticipated by the cited reference. The Examiner is respectfully requested to withdraw the rejection of claims 1 and 2 under 35 USC 102.

Claim Rejections - 35 USC 103

In paragraph 5 of the detailed action, the Examiner has rejected the remaining claims, claims 3 to 9 as being unpatentable over Waarts et al. in view of Veselka et al., US

Patent No. 5,963,567. To begin, since these claims depend upon claim 1, applicant respectfully submits that these claims are patentable for the same reasons presented above. Furthermore, with respect to claims 3-6, the Examiner has stated that Waarts et al. teaches all of the claim limitations except for the limitation that *the predetermined propagation characteristics* are propagation mode, dispersion, and length, which the Examiner has asserted are taught in Veselka et al. by referring to column 1, lines 50-62 of Veselka.

The passage relied on by the Examiner does not teach that optical fiber sections when part of *means for multiplying* have certain *predetermined propagation characteristics*, let alone what those particular propagation characteristics are. Although a dispersion-shifted fiber (DSF) is taught in the passage referred to by the Examiner, propagation mode, dispersion, and length are not taught as being predetermined propagation characteristics for a fiber as part of means for multiplying. Moreover, Veselka teaches using DSF for making a *continuous* spectrum from a discrete spectrum of optical pulses made by a mode-locked laser. The DSF of Veselka does not yield more than two channels from a two channel combined signal, and as such Veselka does not teach the means for multiplying having optical fiber sections with *predetermined propagation characteristics*. Since at

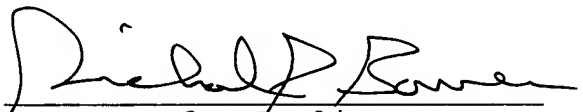
least one limitation of the claim is not taught in the references, a *prima facie* case of obviousness has not been satisfied.

With respect to claims 7-9, the Examiner has stated that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. Applicant submits that since the subject matter of claims 1-6, from which each of claims 7-9 depends, is patentable over Waarts et al. in view of Veselka, the Examiner's objection is thereby traversed.

The Examiner is respectfully requested to withdraw the rejections of claims 3-9 under 35 USC 103.

Favorable consideration and allowance is respectfully requested.

Respectfully submitted,



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